ABSTRACT

A unique system and method for laser vapor deposition of a material onto a substrate are disclosed. The system includes a laser source configured to emit a laser beam, a target material positioned in front of the laser source to be struck by the laser beam, and a substrate positioned behind the target material in relation to the laser beam. The laser beam strikes the target material causing a portion thereof to melt. The melting zone propagates through the target material until is reaches the opposing surface, and a vaporized portion of the target material is ejected onto the substrate. The target material can be deposited onto the substrate in a pre-determined pattern with a pre-determined thickness. In another embodiment of the invention, the target material can be deposited on a cassette structure to facilitate easy access.

W:\15436\31.1.1\FDR0000000331V002.doc

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111